WiSE Communications, Inc.

August 10, 1994

Via: Overnight Mail

RRR on Aug. 12

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Federal Communications Commission Attn: William F Caton, Acting Secretary 1919 M. St. N.W., Rm 222 M/S:1170 Washington, DC 20554 RECEIVED

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RE: EX Parte Filing PR Docket 93-61, Automatic Vehicle Monitoring

Dear Mr. Caton:

As an interested user and manufacturer of Part 15 spread spectrum data communications equipment, we are filing our protest of an informal proposal we have learned is being offered to "compromise" a resolution of subject Docket. This is being done pursuant to Section 1.1206(a)(1) of the Commission's Rules.

All of us that have used Part 15 devices for data links are eager to resolve the LMS/AVM threat to the industry and to trade growth with its associated impact upon employment.

Many analysis and presentations have clearly shown that mutual interference results. In our opinion, a workable "compromise" is yet to emerge.

Other services for location (GPS, wheel track, etc.) are available and a significant amount of spectrum has already been allocated to paging/messaging services. Recent auctions have demonstrated the value of bandwidth for these purposes. This is NOT the legal path to add a new service to an old Part 90 license of limited scope, use conflict, regulatory hierarchy, and bandwidth.

Summary & Comment to August 1994 Proposal

Part 15 devices now operate throughout the entire 902-928 MHz band on a secondary basis. The bands 902-904 MHz, 910-920 MHz, and 926-928 MHz are proposed to be available for non-multilateration AVM/LMS systems (such as local-area "tag reader" systems.). The bands 904-910 MHz and 920-926 MHz would be available for multilateration systems "exclusively". A Part 15 device operating in these multilateration bands is understood not to be considered a source of harmful interference unless at least one of the following "threshold" criteria is met:

	a)	it is an outdoor	device wi	ith an antei	nna more than	. 5 meters al	ove the
		ground;)	
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130	Knowles	Drive				(408)	376-0250
Los	Gatos, C	A 95030					

- b) it uses spread spectrum under § 15.247 and radiates more than 6 dBW effective isotropic radiated power ("EIRP"); or,
- c) it is a field disturbance sensor operating under § 15.245.

If a Part 15 device meets one or more of these criteria and is causing interference to a multilateration system operating in either the 904-910 MHz band or the 920-926 MHz band, the Part 15 operator must work to resolve the interference in accordance with its secondary status. In the band 910-920 MHz, multilateration systems would be allowed on a secondary basis and they would have no hierarchical superiority over Part 15 devices.

The above is a summary of our understanding of the new (informal) proposal.

Key Comment Points

- 1. Any proposed solution to the Part 15 and AVM/LMS problem is not a solution unless it deals with harmful interference to Part 15 from AVM/LMS, as well as harmful interference to AVM/LMS from Part 15. Since LMS is a new service, the LMS rules should be structured so their operations do not significantly impair existing Part 15 Operations. Part 15 interests are not requesting any more prerogatives. This proceeding is about a new service and the Part 15 interests are commenting on the parameters of the service in order to minimize the potential for harmful interference to both new and existing services. Additional Notice and Comment is necessary in this proceeding because it is difficult and unusual to comment on a verbal proposal from the Commission and because such Notice and Comment is necessary in order to conform this with the Administrative Procedure Act.
- 2. It should be deemed that Part 15 operations do not cause harmful interference to any AVM/LMS multilateration system (those operating in the two 6 MHz allocations and those operating in the 10 MHz allocation). The wideband LMS proponents are on record numerous times indicating the Part 15 harmful interference is minimal at most. Therefore, there should be no concern of Part 15 operations causing harmful interference to multilateration systems.
- 3. Wideband AVM/LMS forward links should not be permitted. Wideband forward links will most likely cause harmful interference to all users in the particular frequency band. This prohibition should not impact the functionality of multilateration systems because the forward link is essentially a paging channel and it does not play a part in the actual

location function.

- 4. Narrowband (no more than 25 kHz) AVM/LMS forward links should be allowed only in the 927.500 and 928.000 MHz band. Locating these forward links at the edge of the band will make it easier to avoid the forward links and will not unduly restrict other band users' operations since there are already paging signals at 929 MHz. Operation of the forward links in the manner suggested would permit the AVM/LMS multilateration systems to operate with the full protection of Section 15.5 of the rules.
- 5. In addition to the forward link provisions, it will be necessary to develop power limits and duty cycle limits for the AVM/LMS reverse (i.e., mobile) links. Because these reverse links are wideband transmissions, some necessary limits must be placed on their operations in order that they do not eliminate the possibility of Part 15 devices being able to share the band.
- 6. The impractical "thresholds" suggested in the informal Commission proposal (as above delineated (a) through (c)) present the Commission with an insurmountable administration and enforcement burden. The problem facing the commission would be how to identify the signal causing the alleged harmful interference to the AVM/LMS operations when there are thousands of Part 15 devices operating in the area. The result will simply be mutual interference and resultant user dissatisfaction on a massive scale and/or obsolescence of both fielded equipment and the future use of these bands.
- 7. There should be no above ground height restrictions on Part 15 outdoor (sic, even indoor) antennas. Such restrictions are meaningless. For example an antenna which is only 5 meters above the ground at a height of 1,000 feet above average terrain would have much greater potential for causing an interfering signal than an antenna which is 50 feet above the ground at 0 feet above average terrain. The signal from "indoor" antennas located several stories above ground "in" a parking garage or inside a building next to a window would similarly have the potential to cause more interference than an "outdoor" antenna located 10 meters above the ground. This outdoor antenna height limitation could have a devastating impact on many Part 15 services both existing and future.
- 8. The alleged "threshold" concerning Section 15.245 Field Disturbance Sensors is not a threshold at all. It is an outright prohibition on their operation. These devices must continue to be allowed to operate in the band.



9. In order to permit the continued operation of the Field Disturbance Sensors, the 902-905 MHz band should not include any AVN/LMS operations. The high power emissions of AVM/LMS base stations (or very nearby mobile stations) would "kill" practical use by Part 15.245 authorized equipment now very widely distributed.

Actions Sought

We would ask that full fact-finding, and test result reporting hearings be soon held by the Commission before granting any new use with such access priority that would so seriously "kill" an emerging (now millions in use) public-service industry of Part 15 users.

We and our member trade and technical organizations can assist the Commission in resolving this proposal in the public interest.

Respectfully Submitted,

Wayne D. Moyers,

V.P./C.T.O.

WiSE Communications, Inc.

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cc: Rick Engleman, OET WINForum
Part 15 Coalition